

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT



To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/002086

International filing date (day/month/year)
02.02.2005

Priority date (day/month/year)
04.02.2004

International Patent Classification (IPC) or both national classification and IPC
H04L12/46, H04L12/40, H04L29/06

Applicant
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------------|
| Novelty (N) | Yes: Claims | 1-14,17-23 |
| | No: Claims | 15,16 |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-23 |
| Industrial applicability (IA) | Yes: Claims | 1-23 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The following documents are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1: US 2003/169769 A1 (HO JIN-MENG ET AL) 11 September 2003 (2003-09-11)
D2: US-B1-6 665 313 (CHANG HOON ET AL) 16 December 2003 (2003-12-16)
D3: US 2003/210673 A1 (NISHIMURA TAKUYA) 13 November 2003 (2003-11-13)
D4: US 2003/235197 A1 (WENTINK MAARTEN MENZO) 25 December 2003
(2003-12-25)
D5: WO 03/071744 A (MOTOROLA INC; DOYLE, JOHN; LOGAN, JOHN;
ROHLEDER, MICHAEL; PICKERING,) 28 August 2003 (2003-08-28)

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 does not involve an inventive step and claim 1 therefore does not meet the requirements of Art. 33 (3) PCT:

- 2.1 Document **D2** discloses, in the terminology of claim 1, a composing method for composing a data compartment aggregation packet frame (abstract, lines 1-5) comprising:

generating a plurality of data compartments (fig. 5, (c)), each having a compartment identifier (fig. 5, (b) "H"), an MSDU (fig. 5, (b) "RLP") and a compartment FCS (fig. 5, (c) "CRC");

combining the data compartments to define a data carriage (fig. 5, (d));

generating a MAC header to be located in front of the carriage, said MAC header including a portion allocated with a unique bit pattern; and

generating a frame FCS for error detection in the MAC header and the carriage (fig. 5, (d) "CRC").

- 2.2 Claim 1 differs from **D2** only in that a **MAC header** to be located in front of the carriage is generated, said MAC header including a portion allocated with a unique bit pattern. The objective problem would be how to adapt the aggregation method in D2 for the particularities of other transmission systems, such as systems with MAC frame transmission.

This is however a straightforward variation which is well-known to the skilled person. Since a MAC header adapted to whichever MAC frame structure norm would be needed in this case, and the information that the frame in question is now an *aggregation frame* must be conveyed, the skilled person would implement this feature: see eg D1, Fig. 6 and paragraph 0041. Thus, the skilled person would arrive at the subject-matter of claim 1 without the exercise of inventive skills.

- 2.3 The subject-matter of claim 1 does also not involve an inventive step over the disclosure of D1, D3 or D4 (Article 33(3) PCT), given that these documents attempt to solve the same problem and describe the same type of solution as presently claimed in claim 1, see citations in the International Search Report.

When starting from the disclosure of D1, the only missing feature vis-à-vis claim 1 is the use of compartment FCSs, which is also a straightforward measure that the skilled person would adapt when trying to increase the transmission reliability of the system.

3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 8 and 17 does not involve an inventive step and claim 8 and 17 therefore do not meet the requirements of Art. 33 (3) PCT:

The subject-matter of claim 8 corresponds in the apparatus category to that of claim 1. The subject-matter of claim 17 corresponds in the signal category to that of claim 1. No substantial technical feature is added by any of these claims, so that the reasoning in point 2 also applies to them.

4. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 15 is not new in the sense of Article 33(2) PCT.

Document D1 discloses in the terminology of claim 1: a decomposing method for decomposing a data compartment aggregation packet frame having a MAC header, carriage header and a plurality of data compartments (abstract), said decomposing method comprising:

detecting a unique bit pattern located in a MAC header;
separating data compartments;
preprocessing the data compartments (paragraph 0041)

Therefore, D1 discloses all the features of claim 15.

Furthermore, also documents D3-D5 fully disclose the features of claim 15, see citations in the European Search Report.

5. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 16 is not new in the sense of Article 33(2) PCT.

The subject-matter of claim 16 corresponds in the apparatus category to that of claim 15. No substantial technical feature is added, so that the reasoning in point 4 also applies to claim 16.

6. The additional features of the dependent claims 2-7, 9-14, 18-23 do not add anything novel inventive to the independent claims because these features are either known from the prior art or common measures or variations (Article 33(3) PCT).

Re Item VII

Certain defects in the international application

1. The claims do not contain reference signs in parentheses, Rule 6.2(b) PCT.

2. The independent claims are not in the two-part form vis-à-vis D1-D4, whichever appropriate, Rule 6.3(b) PCT.
3. D1-D5 are not mentioned in the description, Rule 5.1(a)(ii) PCT.